REMARKS

In the Office Action, claims 1-42 were rejected. By the present Response, claims 5, 7, 10, 14-18, 20, 22-26, 31, and 33 are amended for clarification of certain features, and claims 6, 8, 19, 21, 32, 34, and 36 are canceled without prejudice. New claims 43-49 are added. These amendments do not add any new matter. Upon entry of the amendments, claims 1-5, 7, 9-18, 20, 22-31, 33, 35, and 37-49 are pending in the present patent application. Applicants respectfully request reconsideration and allowance of all pending claims.

Amendments to the Specification

As indicated above, Applicants have amended certain paragraphs of the specification to cure minor typographical errors. Applicants respectfully submit that these amendments were not made for reasons related to patentability and that no new subject matter has been added. Accordingly, Applicants respectfully request entry of the amendments to the specification, provided herein.

Rejections Under 35 U.S.C. §102

In the Office Action, the Examiner rejected claims 1-42 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 6,014,473 (the "Hossack reference"). Applicants respectfully traverse this rejection.

Legal Precedent and Guidelines

Anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under section 102, a single reference must teach each and every limitation of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). The prior art reference also must show the *identical* invention "*in as complete detail as contained in the ... claim*" to support a *prima facie* case of anticipation. *Richardson v.*

Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989). Thus, for anticipation, the cited reference must not only disclose all of the recited features but must also disclose the *part-to-part relationships* between these features. *See Lindermann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 486 (Fed. Cir.1984). Accordingly, the Applicants need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter.

With the foregoing legal precedent in mind, Applicants submit that the Examiner's Section 102 rejections of claims 1-42 are vague and do not *clearly* articulate the reasons for rejecting each of the pending claims. For example, Applicants note that the Examiner's reasoning for rejecting all 42 pending claims amounts to just a *single* paragraph in the Office Action, in which the Examiner stated:

> 1. Claims 1-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Hossack et al (US 6,014,473). Hossack et al discloses a method and apparatus for determining motion vectors and imaging an organ including the acquisition of three sets of one-dimensional motion data along perpendicular axes (Col 5 Line 44-Col 6 Line 41, Fig 27g, Figure 17 and Col 17 Line 49-Col 18 Line 18), combination of vectors for three-dimensional representation of the motion of a target area or organ (Fig 43, Col 31 Line 47-Col 32 Line 10, Col 23 Line 1-64, Col 17 Line 25-48, Figure 6-11), where the acquisition of data includes a set of one or more sensors (Col 4 Line 20-57), where the acquisition of motion vectors includes deriving data from an imager to acquire motion data via ultrasonic sensors (Col 4 Line 58-Col 5 Line 33, Col 9 Line 10-55, Col 21 Line 50- Col 22 Line 35), including that of pre-acquisition and acquisition data (Col 9 Line 10-55, Col 11 Line 65-Col 12 Line 20), as well as reconstructed and non-reconstructed data (Col 12 Line 1 1-20, Col 12 Line 43-65, Col 9 Line 10-Col 10 Line 24, Col 10 Line 25-50, Col 5 Line 20-43, Col 29 Line 65-Col 30 Line 16). The methodology for acquisition of data is constant over at least two axes (Col 5 Line 45-Col 6 Line 51), uses ultrasound sensors to acquire imaging data for the motion estimation (Col 5 Line 45-65, Figure 6-11) and validates data using data processing circuitry and a workstation (Col 10 Line 10-55, Col 11 Line 10-53, Col 23 Line 1-Col 24 Line 63).

Office Action, page 2. While this paragraph appears to allege that various features recited in the pending claims are disclosed by Hossack, Applicants submit that these statements appear to be merely conclusory, as the Examiner has not only failed to provide any detailed explanation for applying the teachings of Hossack to the claims, but has also failed to point out which claims he is purporting to reject in view of these statements. Indeed, Applicants note that the Section 102 rejections set forth by the Examiner does not *explicitly* identify any of the pending claims by number.

Further, although the Examiner has provided Applicants with citations from the Hossack reference as to where he believes the claimed subject matter is disclosed, Applicants note that many of these citations reference either an entire column or even multiple columns, sometimes spanning multiple pages of the Hossack reference. Applicants submit that these "overly broad" citations, absent any further explanation, are improper, as they fail to point out with specificity where in the cited reference the Examiner believes the recited subject matter is disclosed. Thus, Applicants submit that the Examiner has *not* met his legal burden of showing that the cited reference discloses the *identical* invention in as *complete detail* as contained in the claims. *See Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

Applicants remind the Examiner that superficial or cursory examinations, such as the present Section 102 rejections in the present Office Action, are improper for failing to conform to the provisions set forth in 37 C.F.R. §1.104(c)(2), which states:

> When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be *designated* as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim *specified*.

S*ee also* M.P.E.P. §707.07. (Emphasis added). Indeed, Applicants believe that the Examiner's analysis falls far short of the level of analysis required by 37 C.F.R. §1.104 or by M.P.E.P. §706. For example, M.P.E.P. §706 states that: "[t]he goal of examination is to clearly articulate any rejection early in the prosecution process so that the Applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity." M.P.E.P. §706. In view of these glaring deficiencies in the examination of the present application, Applicants are faced with the unfair burden of having to guess and speculate as to which claims the Examiner's statements are intended to address and as to where in the "overly broad" citations of the reference the Examiner believes the recited subject matter is disclosed. As such, Applicants have been denied a fair opportunity to respond to the present Office Action, and are thus unable to effectively prosecute the present application. Nevertheless, even despite the Examiner's failure to clearly articulate the reasons for rejecting *each* pending claim, Applicants have made an earnest and good-faith attempt by this Response to point out what Applicants believe are several deficiencies of the Hossack reference as applied to the pending claims. However, if the Examiner chooses to maintain the present rejections in a future Office Action, Applicants respectfully request that the Examiner provide a detailed analysis which conforms to the legal standards set by the Federal Circuit as well as the provisions set forth in Title 37 of the Code of Federal Regulations.

Claim Features of Independent Claims 1, 14, 27, 38, and 42 Omitted from Cited Reference

Turning now to the claims, Applicants note that the present independent claim 1 recites, *inter alia*, "acquiring a first set of one-dimensional motion data for an organ along a first axis by a first methodology; acquiring a second set of one-dimensional motion data for the organ along a second axis by a second methodology, wherein the first axis and the second axis are perpendicular; acquiring a third set of one-dimensional motion data for the organ along a third axis by a third methodology, wherein the third axis is perpendicular to the first axis and the second axis; deriving one or more concurrent motion vectors from *each* of the first, second, and third sets of one-dimensional motion data; and combining the one or more concurrent motion vectors to generate a set of three-dimensional motion data for the organ." (Emphasis added). Independent claim 14, as amended, recites a computer readable storage medium having

executable code stored thereon comprising routines for performing the acts recited by independent claim 1.

Similarly, independent claim 27 recites, *inter alia*, "an imager configured to generate a plurality of signals representative of one or more structures within a region of interest … a sensor-based motion determination system configured to acquire one-dimensional motion data from one or more sensors … wherein the imager, the sensor-based motion determination system, or a combination of the imager and the sensor-based motion determination system is configured to acquire a first, a second, and a third set of one-dimensional motion data for an organ along respective first, second, and third perpendicular axes … and wherein at least one of the sensor-based motion determination system, the data processing circuitry, or the operator workstation are configured to derive one or more concurrent motion vectors from *each* of the first, second, and third sets of one-dimensional motion data and to combine the one or more concurrent motion vectors to generate a set of three-dimensional motion data for the organ." (Emphasis added).

Independent claim 38 recites, *inter alia*, "an imager configured to generate a plurality of signals representative of one or more structures within a region of interest and to acquire at least one set of acquisition image data used to derive a first, a second, or a third set of one-dimensional motion data for an organ along respective first, second, and third perpendicular axes … wherein at least one of the data processing circuitry or the operator workstation is configured to derive one or more concurrent motion vectors from *each* of the first, second, and third sets of one-dimensional motion data and to combine the one or more concurrent motion vectors to generate a set of three-dimensional motion data for the organ." (Emphasis added).

Independent claim 42 recites, *inter alia*, "means for acquiring a first set of one-dimensional motion data for an organ along a first axis by a first methodology … means for acquiring a second set of one-dimensional motion data for the organ along a second axis by a second methodology, wherein the first axis and the second axis are perpendicular … means for acquiring a third set of one-dimensional motion data for the organ along a third axis by a third

methodology, wherein the third axis is perpendicular to the first axis and the second axis … means for deriving one or more concurrent motion vectors from *each* of the first, second, and third sets of one-dimensional motion data … and means for combining the one or more concurrent motion vectors to generate a set of three-dimensional motion data for the organ." (Emphasis added).

Applicants respectfully submit that the Hossack reference fails to teach or suggest several of the features recited by these claims, as will be discussed below.

Acquisition of One-Dimensional Motion Data for an Organ

First, Applicants respectfully submit that the cited reference does not disclose acquiring one-dimensional motion data for an organ. In sharp contrast, the Hossack reference is directed towards a technique for acquiring *two-dimensional* motion data. For example, the "Background" section of the reference clearly states that the invention "relates to an improved system, method and transducer for acquiring two-dimensional image information and relative positional information regarding the image information to allow subsequent three-dimensional or extended field of view reconstruction." Hossack, col. 1, lines 14-18. (Emphasis added).

To provide additional support for this position, Applicants direct the Examiner's attention to Fig. 4 of the Hossack reference, which illustrates an ultrasonic transducer device 16 comprising three transducer arrays 18, 20, and 22. *See id.* at Fig. 4. As discussed above, the Examiner has failed to explicitly identify in the present claim rejections which elements in the cited reference he believes corresponds to the recited claim elements. However, because the data acquisition methodologies disclosed in Hossack appear to be based on ultrasound devices, Applicants can only assume that the Examiner intended to correlate the three ultrasonic transducers arrays 18, 20, and 22 of the Hossack reference to the recited first, second, and third methodologies, respectively, as recited by independent claims 1 and 14. Thus, based on this interpretation, the Examiner would have to demonstrate that the transducer arrays 18, 20, and 22 each acquire *one*-dimensional motion data in order to anticipate independent claims 1, 14, 27, 38,

or 42. However, each of the transducer arrays 18, 20, and 22, are described as acquiring two-dimensional image frames, which are subsequently aligned during reconstruction to create a three-dimensional image. *See id.* at col. 14, lines 55-61. Examples of the two-dimensional image data acquired by transducer arrays 18, 20, and 22 are illustrated in Fig. 20. Accordingly, the Hossack reference does not appear to teach or suggest acquiring one-dimensional motion data, as would be required to anticipate independent claims 1, 14, 27, 38, or 42.

Perpendicular First, Second, and Third Axes

Even assuming, *arguendo*, that the two-dimensional data acquired via transducer arrays 18, 20, and 22 could somehow be interpreted as being "one-dimensional motion data," Applicants submit that the Hossack reference still fails to disclose or suggest that the data is acquired along first, second, and third axes which are perpendicular with respect to one another. In addressing this recited feature in the Section 102 rejections, the Examiner cited to various passages in columns 5-6 and columns 17-18, as well as to Figs. 17 and 27g of the Hossack reference. *See* Office Action, page 2 (Applicants note, however, that there is no Fig. 27g in the reference).

Referring to the cited passages, Applicants note that the first transducer array 18 is described as being configured to acquire a first set of data along an azimuthal axis (e.g., first axis), labeled as "A," the second transducer array 20 is described as being configured to acquire a second set of data along a first tracking axis (e.g., second axis), labeled "T1," and the third transducer array 22 is described as being configured to acquire a third set of data along a second tracking axis (e.g., third axis), labeled "T2." *See id.* at col. 48-56. However, as *clearly* stated in the Hossack reference, both of the tracking axes T1 and T2 are "substantially perpendicular to the azimuthal axis A," but do not appear to be perpendicular to one another. *Id.* at col. 5, lines 54-56. (Emphasis added). Indeed, Fig. 4 of the Hossack reference illustrates the transducer arrays 18, 20, and 22 and their respective axes, wherein the arrangement of the three axes, A, T1, and T2, appears to be such that T1 and T2 are each perpendicular to A, but are parallel to each other. Accordingly, Applicants submit that the Hossack reference appears to disclose, at best, first and

second parallel axes (e.g., T1 and T2) being perpendicular to a third axis (e.g., A1). The Hossack reference does not, however, illustrate that each of the three axes, A, T1, and T2, are perpendicular to each other, as would be required to anticipate independent claims 1, 14, 27, 38, and 42.

The Examiner attempted to further place emphasis on the x, y, and z axes in Fig. 17 of the Hossack reference in support of his position. While the axes illustrated in Fig. 17 do appear to be perpendicular with respect to each other, these *are not* the same axes, A, T1, and T2, along which the transducer arrays 18, 20, and 22 respectively acquire data. Instead, the x, y, and z axes illustrated in Fig. 17 refer to the "Three-Dimensional Volume Filling Computer 36" for performing the reconstruction of the two-dimensional data acquired by the transducer arrays 18, 20, and 22. *See id.* at col. 14, lines 54-61. In other words, the x, y, and z axes are disclosed simply to illustrate that the two-dimensional image data acquired along the A, T1, and T2 axes may be reconstructed into a three-dimensional image. However, these axes are *clearly* not the same axes along which transducer arrays 18, 20, and 22 acquire data.

Therefore, although the Hossack reference appears to disclose that a first axis (e.g., A) may be perpendicular to a second axis (e.g., T1) and a third axis (e.g., T2), the reference certainly does not appear to suggest that *all three* of the axes are perpendicular to each other, and thus cannot anticipate independent claims 1, 14, 27, 38, or 42.

Deriving at Least one Motion Vector for Each of the First, Second, and Third Set of Motion Data

The cited reference also fails to teach deriving at least one concurrent motion vector for *each* of the first, second, and third sets of motion data. Keeping the above part-to-part relationships in mind, Applicants note that although the Hossack reference appears to disclose deriving motion vectors for the second and third sets of data acquired along the T1 and T2 tracking axes, respectively, the reference does not appear to disclose that a motion vector is *also* derived for the first set of data acquired along the azimuthal "A" axis, as would be required to anticipate claims 1, 14, 27, 38, or 42.

For example, referring now to Fig. 1 of the cited reference, three storage arrays 30, 32, and 34 are illustrated as storing a first, a second, and a third set of data acquired by the transducer arrays 18, 20, and 22, respectively. *See id.* at Fig. 1. However, it appears that *only* the second set of data (e.g., T1 data) and the third set of data (e.g., T2 data) are provided to a vector calculator block 42. *See id.* According to the reference, it is this vector calculator block 42 which calculates motion vectors and outputs them to a computer 36 for use in the three dimensional image reconstruction of the acquired data. *See id.* at col. 5, lines 20-23. However, with regard to the first set of data in storage array 30 (e.g., acquired along azimuthal axis "A"), Fig. 1 clearly shows that the first set of data is provided *directly* to the reconstruction computer 36 without having any corresponding motion vectors generated. *See id.* at Fig. 1. In other words, to the extent that the Hossack reference does appear to contemplate deriving motion vectors, it *does not* disclose that a motion vector is derived for *each set of one-dimensional motion data*. Accordingly, Applicants submit that the Hossack reference does not appear to teach or suggest that at least *one* motion vector is generated for *each* of a first, second, and third set of image data, as would be required to anticipate independent claims 1, 14, 27, 38, or 42.

Therefore, for at least the reasons discussed above, Applicants submit that the Hossack reference cannot anticipate independent claims 1, 14, 27, 38, or 42. Accordingly, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §102(b) of independent claims 1, 14, 27, 38, and 42, as well as those claims depending therefrom.

Claim Features of Dependent Claims Omitted from Cited Reference

The present dependent claims are believed to be allowable based on their dependencies from allowable independent claims 1, 14, 27, and 38. Further, for the reasons set forth below, the dependent claims are also believed to be allowable for the subject matter separately recited therein, which Applicants do not believe is disclosed in the Hossack reference.

Validating Motion Data Using One or More Sets of Validation Motion Data

For example, claims 3, 16, 28, and 41 recite validating the one-dimensional motion data "using one or more respective sets of validation motion data." Referring to the specification, validation motion data is described as "motion data acquired for the axis using data-based techniques, such as from pre-acquisition image data or acquisition image data." Application, page 15, lines 7-8. The validation data may be acquired using a validation sensor (e.g., sensor 100, Fig. 5) which may measure either the same or a different parameter from the data set being validated. *See id.* at lines 8-11. In other words, the validation motion data, as recited in the presently pending claims, refers to a separate set of motion data acquired for the purposes of "validating," or establishing a metric of reliability for the acquired one-dimensional motion data. *See id.* at lines 17-18.

With regard to this recited feature, the Examiner essentially cites to the entirety of columns 10, 11, 23 and 24 of the Hossack reference, but otherwise provides no other explanation for this rejection. However, after reviewing these passages, Applicants do not believe that Hossack teaches or even suggests the use of "validation motion data," discussed above. For instance, column 10 of the reference generally discusses various suitable formats for the tracking image data. For example, this passage discloses that the tracking image data (e.g., data obtained along tracking axes T1 and T2) may include various pixellated or acoustic line data forms. *See* col. 10, lines 9-24. This data may then be processed by various motion estimation apparatuses to determine relative motion. *See id.* col. 10, line 25 – col. 11, line 9. Column 11 of the reference generally states that higher sampling rates of the data may result in more accurate estimations. For example, the reference notes that while only two motion detection operations are required per tracking array (e.g. arrays 20, and 22), that performing additional tracking operations may increase the accuracy of the motion estimation method. Further, Applicants note that columns 23 and 24 of the reference appear to describe various techniques for motion estimation which aim to reduce total processing time, such as via interpolation.

Applicants do not believe, however, that any of the columns or passages cited by the Examiner describes validating the tracking data using any type of validation motion data in a manner which would be consistent with the above-discussed definitions of these terms, as set forth in the specification of the presently pending application. For at least these reasons, Applicants respectfully submit that the Hossack reference cannot anticipate dependent claims 3, 16, 28, or 41.

Acquiring One-Dimensional Data via an Imager

Claims 4, 17, and 30 each recite that at least one set of the recited first, second, or third sets of one-dimensional motion data is obtained via an imager. As discussed above, Hossack appears to describe that the transducer arrays 18, 20, and 22 each acquire *two*-dimensional data. However, even assuming for the sake of argument that the arrays 18, 20, and 22 could somehow be interpreted as acquiring one-dimensional motion data, Applicants do not believe that the data is being acquire via an imager.

The Hossack reference states that the transducer arrays 18, 20, and 22 are each made up of a plurality of transducer elements. *See id.* at col. 5, lines 45-48. In the present rejections, the Examiner appears to have characterized these transducer elements as being sensors. For example, the Examiner refers to these transducer elements in the Office Action as "ultrasonic *sensors*." Office Action, page 2. (Emphasis added). As such, Applicants believe the Examiner intended for the ultrasonic transducer elements to correspond to either the "one or more sensors," as recited by claims 2 and 15, the "ultrasonic sensors," as recited by claim 29, or the "sensor-based motion determination system," as recited by claims 35-37. Therefore, because the three sets of motion data discussed in the Hossack reference are *all* acquired by *sensors*, Applicants submit that the reference fails to disclose that at least one of the sets of motion data are acquired by an imager.

Further, if the Examiner is attempting to assert that the transducer elements comprising the transducer arrays 18, 20, and 22 could be considered as both a sensor *and* imager, Applicants note that such an interpretation would be inconsistent with the plain language of the claims, which separately recites an imaging system and a sensor-based system as being two *distinct* elements. Alternatively, if the Examiner *does* intend to characterize the transducer arrays 18, 20, and 22 as an imager for rejecting claims 4, 17, and 30, it would also be inconsistent for the Examiner to simultaneously correlate the transducer arrays 18, 20, and 22 to sensors for rejecting claims 2, 15, 29, and 35-37. Therefore, because it appears the Examiner intended for the transducer arrays 18, 20, and 22 to constitute *sensors*, the Hossack reference cannot anticipate dependent claims 4, 17, and 30, which require that at least one of the acquired sets of motion data is acquire using an imaging system.

Acquiring at least one set of Motion Data via an Imager and one set of Motion Data via a Sensor

Amended dependent claims 10 and 23 generally recite that at least one of the three sets of motion data are acquired by a sensor-based methodology *and* that at least one of the three sets of motion data are acquired by an image-based methodology. Keeping the above discussion regarding dependent claims 4, 17, and 30 in mind, Applicants reemphasize that the Examiner appears to have characterized the transducer arrays 18, 20, and 22 as being *sensors*. Thus, it would be improper for the Examiner to simultaneously characterize the transducer arrays 18, 20, or 22 as *imagers*. Accordingly, Applicants submit that the Hossack reference fails to teach or suggest that the three sets of one-dimensional data include at least one set of data that is acquired by an imager *and* also include at least one set of motion data that is acquired by a sensor. Therefore, the Hossack reference cannot anticipate dependent claims 10 or 23.

In view of these deficiencies, among others, the Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 102 of the above discussed dependent claims.

New Claims

By this Response, Applicants have added new dependent claim 43-49. Each of the new claims is believed to be allowable based on their dependencies from one of the allowable independent claims 1, 14, 27, or 38. Furthermore, the newly added dependent claims are also believed to be allowable for the subject matter separately recited therein, which Applicants do not believe is disclosed in the Hossack reference.

Acquiring Measured Mechanical Motion Data

New claims 43, 45, and 49 each recite that the one-dimensional data comprises measured *mechanical* motion data. As stated in the specification, mechanical motion data may be either measured or detected. *See* Application, page 7, lines 18-22. For example, certain devices may be capable of measuring mechanical motion data by obtaining a quantitative value, such as measuring a quantitative value of pressure (e.g., pascals, bars, atmospheres, etc.) via a pressure sensor, measuring a quantitative value of displacement (e.g., meters, inches, etc.) via a displacement sensor, or measuring a quantitative value of acceleration (e.g., meters per second-squared), for example, via an accelerometer. *See id.* Further, other devices, though unable to actually measure the mechanical motion, may nevertheless be capable of detecting the motion. However, it is important to note that measuring mechanical motion, as opposed to merely detecting the motion, do not constitute the same action.

With this in mind, Applicants emphasize once again that the Hossack reference appears to discuss the use of ultrasound transducers for acquiring image data. As will be appreciated by those skilled in the art, ultrasound devices are capable of detecting mechanical motion, but are generally not regarded as devices for *measuring* mechanical motion. For example, ultrasound devices generally operate by acquiring data (e.g., via transducers) indicative of the ultrasonic reflections or "echoes" from a subject of interest. Although the reflection data acquired by ultrasound devices, when viewed over time, may appear to show the motion of an organ, the reflection data itself is not the equivalent of *measuring* mechanical motion of the organ, such as

measuring pressure, displacement, acceleration, or velocity. In view of this deficiency, among others, Applicants believe new claims 43, 45, and 49 are allowable over the Hossack reference.

Sensors Affixed to a Subject of Interest

New claims 44 and 46 recite that one or more sensors are *affixed* to a subject of interest (e.g., the skin of a patient). This feature does not appear to be disclosed by the Hossack reference. In contrast, the Hossack reference describes three transducer arrays 18, 20, 22 mounted on a support element with *moves* along a subject of interest. For example, the reference states "the transducer of this invention includes a support element and first, second, and third transducer arrays coupled to move with the support element." Hossack, col. 2, lines 38-42. The movement of the transducer arrays acquires tracking information, which can then be used to reconstruct a three-dimensional image. *See id.* at col. 2, lines 52-59. In other words, the operation of the invention disclosed by Hossack relies on the movement of the transducers arrays to acquire data. Therefore, it certainly does not appear that the transducer arrays could be considered as being affixed to a subject of interest, as would be required to anticipate claims 44 and 46. In view of this deficiency, Applicants submit that new claims 44 and 46 are allowable over the Hossack reference.

New Claim 47

New claim 47 recites subject matter similar to amended dependent claims 10 and 23. Specifically, claim 47 recites that at least one of the three sets of motion data are acquired via an imager, and that at least one of the three sets of motion data are acquired via a sensor. Accordingly, Applicants believe new claim 47 to be allowable for at least the same reasons discussed above with regard to dependent claims 10 and 23.

In view of the above discussion, Applicants respectfully submit that all the newly added claims are patentable over the Hossack reference. Allowance of these new claims is therefore, respectfully requested.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: April 29, 2008

/John M. Rariden/

John M. Rariden
Reg. No. 54,388
FLETCHER YODER
P.O. Box 692289
Houston, TX 77269-2289
(281) 970-4545